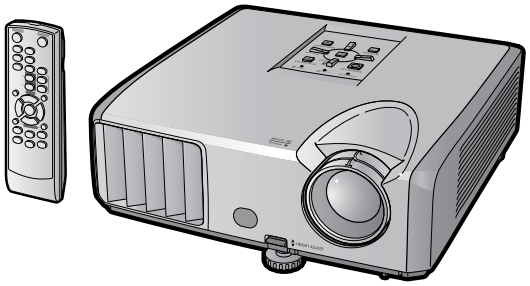
SHARP SERVICE MANUAL

No. S57J1XR-40X//



MULTIMEDIA PROJECTOR

MODELS XR-40X XR-41X XG-F260X

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

OUTLINE

This Service Manual covers the differences from XR-30X/XG-F210X. For other technical information, refer to the XR-30S/XR-30X/XG-F210X (No. S47E3XR-30XS/) Service Manual.

CONTENTS

OUTLINE AND MODIFIED PARTS LIST
OUTLINE.....i
MODIFIED PARTS.....i

SAFETY PRECAUTION
IMPORTANT SERVICE SAFETY NOTES.....ii
Precautions for using lead-free solder vii

CHAPTER 1. OPERATION MANUAL
[1] Specifications 1-1

CHAPTER 2. ELECTRICAL ADJUSTMENT
[1] ELECTRICAL ADJUSTMENT..... 2-1
[2] Adjustment mode process menu..... 2-4

Parts Guide

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

OUTLINE AND MODIFIED PARTS LIST

OUTLINE

This Service Manual covers the differences from XR-30X/XG-F210X. For other technical information, refer to the XR-30S/XR-30X/XG-F210X (No. S47E3XR-30XS/) Service Manual.

MODIFIED PARTS

(XR-30X/XG-F210X → XR-40X/XR-41X/XG-F260X)

Ref.No.	Description	XR-30X/XG-F210X	XR-40X/XR-41X/XG-F260X	Note
PRINTED WIRING BOARD ASSEMBLIES				
	BALLAST POWER Ass'y	DSETUE149FMG0	←	-
	BALLAST CONTROL Unit	DUNTKE150WEF0	←	-
	PHOTO SENSOR Unit	DUNTKE151WEF0	←	-
	R/C RECEIVER Unit	DUNTKE152WEF0	←	-
	MAIN Unit	DUNTKE153FMF0 (XR-30X)	DUNTKE153FMF2 (XR-40X/41X)	No parts changed
	MAIN Unit	DUNTKE153FMF4 (XG-F210X)	DUNTKE153FMF3 (XG-F260X)	No parts changed
	DMD Unit	DUNTKE154WEF0	←	-

CABINET AND MECHANICAL PARTS : Please refer to a Parts Guide.

OPTICAL MECHANISM PARTS : Please refer to a Parts Guide.

SUPPLIED ACCESSORIES : Please refer to a Parts Guide.

PACKING PARTS AND ACCESSORIES : Please refer to a Parts Guide.

SERVICE JIGS AND EQUIPMENT(USE FOR SERVICING) : Please refer to a Parts Guide.

SAFETY PRECAUTION

IMPORTANT SERVICE SAFETY NOTES

IMPORTANT SERVICE SAFETY NOTES (for USA)

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and servicing guidelines as follows:**

WARNING

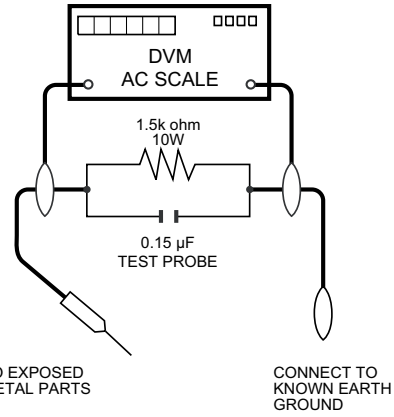
1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

BEFORE RETURNING THE PROJECTOR: (Fire & Shock Hazard)

Before returning the projector to the user, perform the following safety checks:

1. Inspect lead wires are not pinched between the chassis and other metal parts of the projector.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for current leakage in the following manner:

- Plug the AC cord directly into a 120 - volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in parallel between all exposed metal cabinet parts and earth ground.
- Use an AC voltmeter with sensitivity of 5000 ohm per volt., or higher, sensitivity to measure the AC voltage drop across the resistor.
- All checks must be repeated with the AC plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these checks.)
  Any reading of 0.4 volts RMS (this corresponds to 0.27 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



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SAFETY NOTICE

Many electrical and mechanical parts in DLP® Projector have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams. For continued protection, replacement parts must be identical to those used in the original circuit. The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

WARNING: The bimetallic component has the primary conductive side exposed. Be very careful in handling this component when the power is on.

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PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

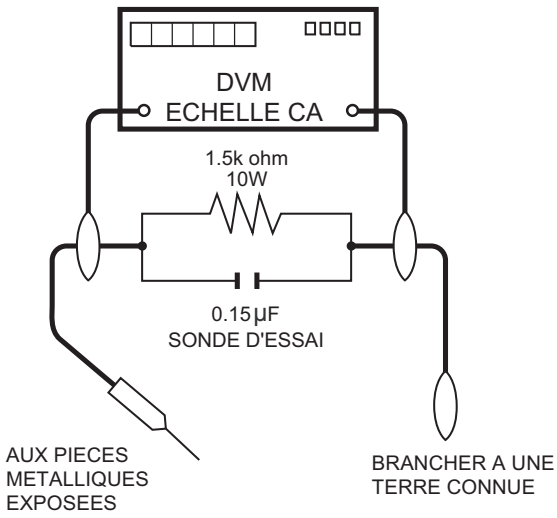
1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.

VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 120 - V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1.5 kΩ 10 watts en parallèle avec un condensateur de 0.15µF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000Ω/V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
  La tension de pointe mesurèe ne doit pas dépasser 0.4V (correspondante au courant CA de pointe de 0.27mA). Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.



AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les projecteur à DLP® présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue.
Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque "⚠" et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques. Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies ou autres accidents.

AVERTISSEMENT: La composante bimétallique dispose du conducteur primaire dénudé. Faire attention lors de la manipulation de cette composante sous tension.

NOTE TO SERVICE PERSONNEL

UV-RADIATION PRECAUTION

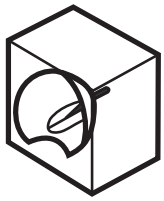
The light source, lamp, in the projector emits small amounts of UV-Radiation.

AVOID DIRECT EYE AND SKIN EXPOSURE.

To ensure safety please adhere to the following:

1. Be sure to wear sun-glasses when servicing the projector with the lamp turned “on” and the top enclosure removed.

2. Do not operate the lamp outside of the lamp housing.



3. Do not operate for more than 2 hours with the enclosure removed.

UV-Radiation and Medium Pressure Lamp Precautions

1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type AN-XR30LP rated 200W DC.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

NOTE POUR LE PERSONNEL D’ENTRETIEN

PRECAUTION POUR LES RADIATIONS UV

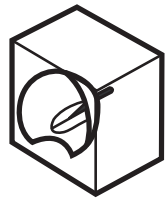
La source de lumière, la lampe, dans le projecteur émet de petites quantités de radiation UV.

EVITEZ TOUTE EXPOSITION DIRECTE DES YEUX ET DE LA PEAU.

Pour votre sécurité, nous vous prions de respecter les points suivants:

1. Toujours porter des lunettes de soleil lors d’un entretien du projecteur avec la lampe allumée et le haut du coffret retiré.

2. Ne pas faire fonctionner la lampe à l’extérieur du boîtier de lampe.



3. Ne pas faire fonctionner plus de 2 heures avec le coffret retiré.

Précautions pour les radiations UV et la lampe moyenne pression

1. Toujours débrancher la fiche AC lors du remplacement de la lampe.
2. Laisser l’unité refroidir pendant une heure avant de procéder à l’entretien.
3. Ne remplacer qu’avec une lampe du même type. Type AN-XR30LP, caractéristique 200W-DC.
4. La lampe émet de petites quantités de radiation UV- éviter tout contact direct avec les yeux.
5. La lampe moyenne pression implique un risque d’explosion. Toujours suivre les instructions d’installation décrites ci-dessous et manipuler la lampe avec soin.

UV-RADIATION PRECAUTION (Continued)

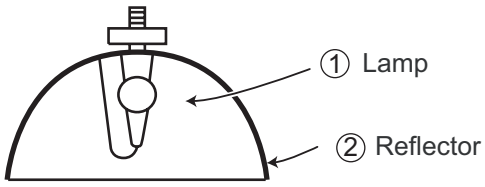
■ Lamp Replacement

Note:

Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.)

Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.

[Use original replacement only.]



DANGER ! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

Since small amounts of UV-radiation are emitted from an opening between the exhaust fans, it is recommended to place the cap of the optional lens on the opening during servicing to avoid eye and skin exposure.

PRECAUTION POUR LES RADIATIONS UV (Suite)

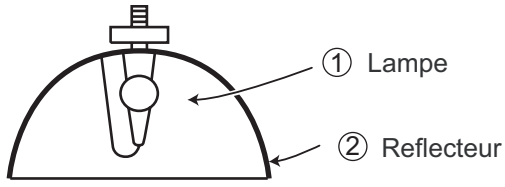
■ Remplacement de la lampe

Remarque:

Comme la lampe devient très chaude pendant le fonctionnement de l'unité, son remplacement ne doit être effectué au moins une heure après avoir coupé l'alimentation (pour permettre à la lampe de refroidir).

En installant la nouvelle lampe, s'assurer de ne pas toucher la lampe (ampoule). Remplacer la lampe en tenant son réflecteur ②.

[N'utiliser qu'un remplacement d'origine.]



DANGER ! — Ne jamais mettre sous tension sans la lampe pour éviter un choc électrique ou des dommages des appareils car le stabilisateur génère de hautes tensions à sa mise en route.

Comme de petites quantités de radiation UV sont émises par une ouverture entre les ventilateurs aspirants, il est recommandé de placer le capuchon de l'optique optionnelle sur l'ouverture pendant l'entretien pour éviter une exposition des yeux et la peau.

WARNING: High brightness light source, do not stare into the beam of light, or view directly. Be especially careful that children do not stare directly into the beam of light.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO MOISTURE OR WET LOCATIONS.

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT REMOVE SCREWS EXCEPT SPECIFIED USER SERVICE SCREW.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE CABINET.
NO USER-SERVICEABLE PARTS EXCEPT LAMP UNIT.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lighting flash with arrowhead within a triangle is intended to tell the user that parts inside the product are risk of electric shock to persons.

The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the manual with the projector.

CAUTION
(POWER Unit)

6.3A 250V

For continued protection against a risk of fire, replace only with same type 6.3A, AC250V fuse. (F701)

AVERTISSEMENT: Source lumineuse de grande intensité. Ne pas fixer le faisceau lumineux ou le regarder directement. Veiller particulièrement à éviter que les enfants ne fixent directement le faisceau lumineux.

AVERTISSEMENT: AFIN D'EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, NE PAS PLACER CET APPAREIL DANS UN ENDROIT HUMIDE OU MOUILLE.

ATTENTION

RISQUE D'ÉLECTROCUTION. NE PASR ETIRER LES VIS Á L'EXCEPTION DE LA VIS DE REPARATION UTILISATEUR SPECIFIEES

ATTENTION: POUR EVITER TOUT RISQUE D'ELECTROCUTION, NE PAS RETIRER LE CAPOT.
AUCUNE DES PIECES INTERIEURES N'EST REPARABLE PAR L'UTILISATEUR, A L'EXCEPTION DE L'UNITE DE LAMPE. POUR TOUTE REPARATION, S'ADRESSER A UN TECHNICIEN D'ENTRETIEN QUALIFIE.

L'éclair terminé d'une flèche à l'intérieur d'un triangle indique à l'utilisateur que les pi'eces se trouvant dans l'appareil sont susceptibles de provoquer une décharge électrique.

Le point d'exclamation à l'intérieur d'un triangle indique à l'utilisateur que les instructions de fonctionnement et d'entretien sont détaillées dans les documents fournis avec le projecteur.

PRECAUTION
(Unité de PUTSSANCE)

6.3A 250V

Pour une protection continue contre un risques d'incendie, ne remplacer qu'avec un fusible 6.3A,AC250V du même type. (F701)

Precautions for using lead-free solder

■Employing lead-free solder

- "PWBs" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

  Example:

Indicates lead-free solder of tin, silver and copper.

■Using lead-free wire solder

- When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

  As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

■Soldering

- As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

  Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

  If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

  When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

- Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Part No.	★	Description	Code
ZHNDAi123250E	J	ϕ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm 1kg(1roll)	BM

CHAPTER 1. OPERATION MANUAL

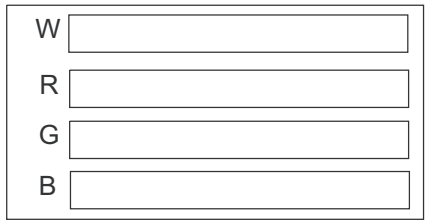
[1] Specifications

Model		XR-40X/XR-41X/XG-F260X	
Display device		0.55" DLP Chip	
Resolution		XGA (1024 x 768)	
Lens	F number	F 2.5 – 2.6	
	Zoom	Manual, x 1.15 (f = 20.4 – 23.5 mm)	
	Focus	Manual	
Input terminal	DVI-D (Compatible with HDCP)	XR-40X/XR-41X	x 1
	DVI-I (Compatible with HDCP)	XG-F260X	x 1
	RGB/Component (mini D-sub 15 pin)	x 1	
	S-Video (mini DIN 4 pin)	x 1	
	Video (RCA)	x 1	
	Audio (ø3.5 mm stereo minijack)	x 1	
	Audio (RCA)	x 1 (L/R)	
Output terminal	RGB/Component (mini D-sub 15 pin)	x 1	
	Audio (ø3.5 mm stereo minijack)	x 1	
Control, others	USB (Type B)	x 1	
	RS-232C (mini DIN 9 pin)	x 1	
Speaker		2 W (Mono)	
Projection lamp		200 W	
Rated voltage		AC 100 – 240 V	
Rated frequency		50/60 Hz	
Input current		2.9 A	
Power consumption (Standby)		283 W (4.3 W) with AC 100 V 270 W (4.4 W) with AC 240 V	
Operation temperature		41°F to 95°F (+5°C to +35°C)	
Cabinet		Plastic	
Dimensions (main body only)		$10\ ^{41}/_{64}$" x $3\ ^{33}/_{64}$" x $10\ ^{7}/_{16}$" (270 (W) x 89 (H) x 265 (D) mm)	
Weight (approx.)		6.4 lbs. (2.9 kg)	

As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

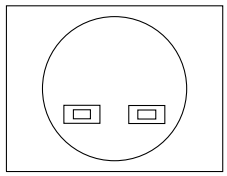
CHAPTER 2. ELECTRICAL ADJUSTMENT

[1] ELECTRICAL ADJUSTMENT

No.	Adjusting point	Adjusting conditions	Adjusting procedure
1	EEPROM initialization	1. Turn on the power (with the lamp on) and warm up the set for 15 minutes.	•Make the following settings. Press S2551 to call the process mode and execute "SS2" on SS menu.
2	Model setting	(Process menu) 1. Select the following group and subject. Group: CONFIRM Subject: MODEL	1. Set as below. XR-40X : 1 XR-41X : 4 XG-F260X : 3
3	Adjustment of CW index	1. Signal input: Send 256 STEP color bar. XGA series (XGA60HZ), 2. Select the following group and subject. Group: ADJUST CW/Auto KS Subject: CW-INDEX.	1. The signal is input into computer 1. 2. Select the adjustment item and adjust the lamp gradation patterns of RGBW so that smooth patterns without noise appear. 
4	R/G/B contrast adjustment (manual or automatic)	1. Select the following group and subjects. Group : ADJUST AD/DLP Subject : R-CONT G-CONT B-CONT (Process GAMMA interlock) 2. Amplitude level 96% (0.67Vpp) the signal is input into computer 1. XGA series (XGA60HZ)	1. Measure chromaticity of the 96% white wind pattern using CA100. 2. On the screen where bit dropouts occur, raise the values of R/G/B-Contrast. Adjust the values so that bright red, green, and blue bit dropouts appear on a black background; and amounts of change in x value of R and y values of G/B become 100/1000 or more. 3. If adjustment is performed manually watching the screen, make adjustment so that bright red, green, and blue bit dropouts appear on more than half of the screen.
5	RGB white balance adjustment	1. 50% gray pattern signal is input into computer 1. XGA series (XGA60HZ) 2. Select the following group and subjects. Group : ADJUST AD/DLP Subject : R-GAIN G-GAIN B-GAIN	1. Raise the values of two of R/G/B-GAIN (default: 100) so that the following chromaticity values are obtained using CL200. x value: 295 ± 5 y value: 310 ± 5
6	sRGB white balance adjustment	1. 50% gray pattern signal is input into computer 1. XGA series (XGA60HZ) 2. Select the following group and subjects. Group : CONFIRM/DLP Subject : S-G-OS S-B-OS	1. Adjust S-G-OS and S-B-OS so that the following chromaticity values are obtained using CL200. x value: 313 ± 5 y value: 329 ± 5

Check items

No.	Adjusting point	Adjusting conditions	Adjusting procedure
1	1 Adjustment of RGB brightness	1. Select the following group and subjects. Group : CONFIRM/AD Subject : R-BRIGHT G-BRIGHT B-BRIGHT (Process GAMMA interlock)	1. Check the fixed value. Fixed value : 127

No.	Adjusting point	Adjusting conditions	Adjusting procedure
2	Adjustment of Component offset	1. Feed 10-step signal with 480P component 100% amplitude. 2. Select the following group and subjects. Group : CONFIRM/AD Subject : C-R-OS C-B-OS (Process GAMMA interlock)	1. Check the fixed value. C-R-OS : 257 C-B-OS : 257
3	Adjustment of DLP Brightness	1. Select the following group and subject. Group : CONFIRM/DLP Subject :R-BLK G-BLK B-BLK (Process GAMMA interlock)	1. Check the fixed value. Fixed value : 256
4	Video Contrast adjustment	1. Feed NTSC 100% wind pattern signal. (Signal with burst) 2. Select the following group and subjects. Group : CONFIRM/VIDEO Subject : V-CONT	1. Check the fixed value. Fixed value : 124
5	Adjustment of Video Brightness	1. Feed NTSC 100% wind pattern signal. (Signal with burst) 2. Select the following group and subject. Group : CONFIRM/VIDEO Subject : V-BRIGHT	1. Check the fixed value. Fixed value : 68
6	Adjustment of Video Tint	1. Feed split color bar. 2. Select the following group and subject. Group : CONFIRM/VIDEO Subject : V-HUE	1. Check the fixed value. Fixed value : 128
7	Adjustment of Video color saturation	1. Select the following group and subject. Group : CONFIRM/VIDEO Subject : V-COLOR	1. Check the fixed value. Fixed value : 154
8	RGB tone reproduction adjustment	1. Feed the SMPTE pattern signal.	1. Make sure the 100% and 95% white as well as the 0% and 5% black gradations are visible. 
9	VIDEO white balance adjustment	1. Feed the 50% gray signal. 2. Select the following group and subjects. Group :CONFIRM/VIDEO Subject : V-R-OS V-B-OS	1. V-R-OS is 132. V-B-OS is 132.
10	White balance checking and readjustment	1. RGB Input sRGB Input VIDEO Input DTV Input DVD Input	Check that there is no deviation of white balance with the monitor.
11	Off-timer performance	1. Select the following group and subjects. Group :CONFIRM/CHECK Subject : TEMP-OFF	1. Select OFF from the process mode. Make sure the off-timer starts with 5 minutes onscreen and count one minute in one second. And then indication is 0 minute, the power supply of the set is cut off.
12	Thermistor performance checking	1. Heat the thermistor with a hair dryer.	1. Make sure that the temperature is indicated.
13	Auto sync performance checking	1. Feed the phase check pattern signal.	1. In the VGA, SVGA, XGA and SXGA modes, make sure the Clock, Phase, H-Pos and V-Pos settings can be automatically adjusted.
14	DVI input operation check	Send the video signal to the DVI terminal.	1. For XR-40X/XR-41X, check that an image is properly projected through the digital input. 2. For XG-F260X, check that an image is properly pro jected through the digital input and analog input.
15	Monitor out check	1. Send signals to COMPUTER 1 and COMPUTER 2. 2. Connect another monitor to the monitor out. 3. Connect the audio OUT.	1. Check that the same images as seen on the screen appear on the connected monitor and that the sound from the sound source connected to the audio OUT is heard.

<table>
<tr><th>No.</th><th>Adjusting point</th><th>Adjusting conditions</th><th>Adjusting procedure</th></tr>
<tr><td>16</td><td>RS232C operation check</td><td>1. Connect the unit and a PC with the RS232C cable.</td><td>1. Send a command from the PC, and check it functions correctly.</td></tr>
<tr><td>17</td><td>Model name and version check</td><td>1. Select the following group.
Group : INFO/VERSION.</td><td>1. The model name appears in the MODEL field, and the firmware version in the VERSION field. Check that they are correct.</td></tr>
<tr><td>18</td><td>Setup guide screen check</td><td>1. Turn on the power after making the setup guide display ON setting or factory setting (SS4, etc.).</td><td>1. Check that the 4-split screen is displayed correctly and the display contents are correct.</td></tr>
<tr><td>19</td><td>Delivery settings</td><td colspan="2">1. Make the following settings.

<table><tr><th>Destination</th><th>Process adjustment</th><th>Remote control adjustment</th></tr><tr><td>USA</td><td>SS4</td><td>Factory setting at 4</td></tr><tr><td>Others</td><td>SS3</td><td>Factory setting at 3</td></tr></table></td></tr>
</table>

* Writing a software program (before main PWB is mounted)

Use the DLP Composer Lite Ver. 4.2 to download the firmware.

After writing the specified version of firmware to the PWB using the RS232C cable, check the version of the written firmware.

If no software program is written, all three LEDs light up in the chassis inspection process.

Calling and quitting the process mode with the control keys on this model.

* Although it is possible for the process OUT to exit using the process menu, the IN/OUT toggle command is also available considering the existing specification.

1) Calling and quitting

   With the menu not displayed, press the "ENTER", "ENTER", "VOL+", "VOL-", "ENTER", "ENTER" and "MENU" keys on the remote control or on the main unit.

2) Others

   Press the S2551 process key (toggle) on the main PWB to call and quit the process menu.

NOTE: When adjusting in the process mode, set a signal with a vertical frequency of 60 Hz or no signal. (May not be properly adjusted with other signals.)

Resetting the lamp timer for this model

1) Resetting procedure

   In Stand-by, run this command to clear the operating time of the lamp to 0 and turn on the power.

   Press and hold " ▼ ", "ENTER", and "MENU", and then press the "STANDBY/ON" key of the set.

Forced disabling of the System-Lock of this model

1) Disabling procedure

   With System-Lock input window onscreen, press the "MENU", "ENTER", "ENTER", "MENU", "ENTER", "ENTER" and "MENU" keys, in this order, on the remote controller.

[2] Adjustment mode process menu

1st Layer	2nd Layer		Default
ADJUST	CW/Auto KS	CW-INDEX	20
		CAL	
		K-SENS	(0)
	AD/DLP	R-CONT	110
		G-CONT	110
		B-CONT	110
		R-GAIN	100
		G-GAIN	100
		B-GAIN	100
	SS	SS1	—
		SS2	—
		SS3	—
		SS4	—
		SS5	—
		SS6	—
CONFIRM	AD	R-BRIGHT	127
		G-BRIGHT	127
		B-BRIGHT	127
		C-R-OS	257
		C-B-OS	257
	DLP	R-BLK	256
		G-BLK	256
		B-BLK	256
		S-R-OS	128
		S-G-OS	128
		S-B-OS	128
	VIDEO	V-CONT	124
		V-BRIGHT	68
		V-COLOR	154
		V-HUE	128
		V-R-OS	132
		V-G-OS	128
		V-B-OS	132
		OFFSET-MODE	0
		OFFSET-CONT	0
		OFFSET-BRI	0
	MODEL	MODEL-SELECT	0
	CHECK	LED-CHK	0
		TEMP-OFF	—
INFO	VERSION	MODEL	—
		VER.	—
	PATTERN	RGB	1
		RGB50	1
		CORSS	1
		STEP	1
		COLOR	1
		CHR	1
	LAMP	CURRENT	0
		HISTORY1	0
		HISTORY2	0
		HISTORY3	0
		HISTORY4	0
		TOTAL	0
	TEMP/FAN	TEMP1	—
		TEMP2	—
		FAN0	3
		FAN1	3
		FAN2	3

1st Layer	2nd Layer		Default
OTHER	SPECIAL	USB-MODE	0
		HDCP-MODE	0
		PULSE-MODE	0
	EDID	EEP-SELECT	1
		EEP-WP	0
	EXIT		

1. Adjustment of ballast unit output power (lamp power)

1. List of parts requiring adjustment

   When replacing the following parts, adjust the ballast unit output power (lamp power).

	Part name	Ref No.	Part code
1	Cement resistor	R923	RR-FZA002WJZZ
2	Ballast Control PWB	——	DUNTKE150WEF0
3	Ballast microprocessor	IC7707	RH-iXC103WJZZQ
4	5V regulator	IC7704	VHiTA78L05F-1Y
5	Ballast Switching Control	IC7701	VHiM51995AF-1Y

2. Adjustment jigs

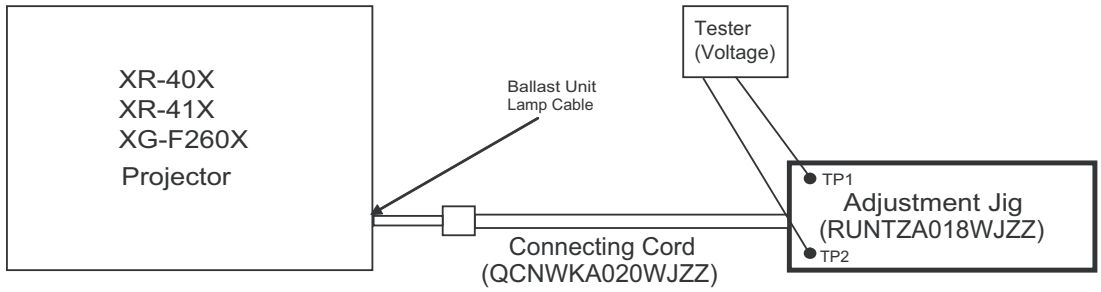
   The following jigs are required for adjusting the ballast unit output power (lamp power).

	Part name	Part code
1	Adjustment jig (resistance load 25 Ω)	RUNTZA018WJZZ
2	Connecting cord (conversion cable)	QCNWKA020WJZZ

3. Ballast unit output power (lamp power) adjustment method

   Adjust the ballast unit output power (lamp power) in the following method.

[Setting method]



2. Adjustment method

1) Unplug the ballast unit lamp cable of the projector from the lamp and connect the cable to the connecting cord (QCNWKA020WJZZ).
2) Connect the connecting cord (QCNWKA020WJZZ) to the adjustment jig (RUNTZA018WJZZ).
3) Connect TP1 of the adjustment jig (RUNTZA018WJZZ) to the negative terminal of the tester and TP2 to the positive terminal.
4) Turn on the projector.
5) Check the Lamp setting to “Bright”.
6) Ageing the projector for 60 seconds or more.
7) Adjust the volume resistor (R7805) of the ballast control PWB (DUNTKE150WEF0) so that the voltage of the tester reaches 71±0.5V.

Adjustment value: 71±0.5V

CAUTION: (1) Caution for electric shock: Do not touch the test points TP1 and TP2 of the adjustment jig when supplying power since a high voltage and large current is applied to them.

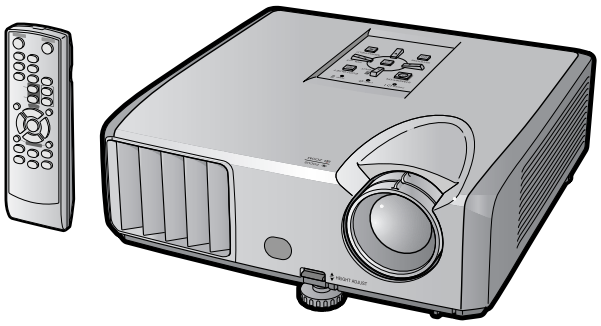
(2) Caution for heat: Be careful that the resistance load of the adjustment jig produces a high temperature when supplying power.

(3) Connection of the lamp cable: Check that the lamp cable and connecting cord (QCNWKA020WJZZ) are connected securely.

Poor connection may cause smoking or ignition due to arc discharge.

SHARP PARTS GUIDE

MULTIMEDIA PROJECTOR



MODELS **XR-40X**
XR-41X
XG-F260X

Note:
The reference numbers on the PWB are arranged in alphabetical order.

CONTENTS

[1] PRINTED WIRING BOARD ASSEMBLIES

[2] CABINET AND MECHANICAL PARTS

[3] OPTICAL MECHANISM PARTS

[4] SUPPLIED ACCESSORIES

[5] PACKING PARTS (NOT REPLACEMENT ITEM)

[6] SERVICE JIGS AND EQUIPMENT (USE FOR SERVICING)

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

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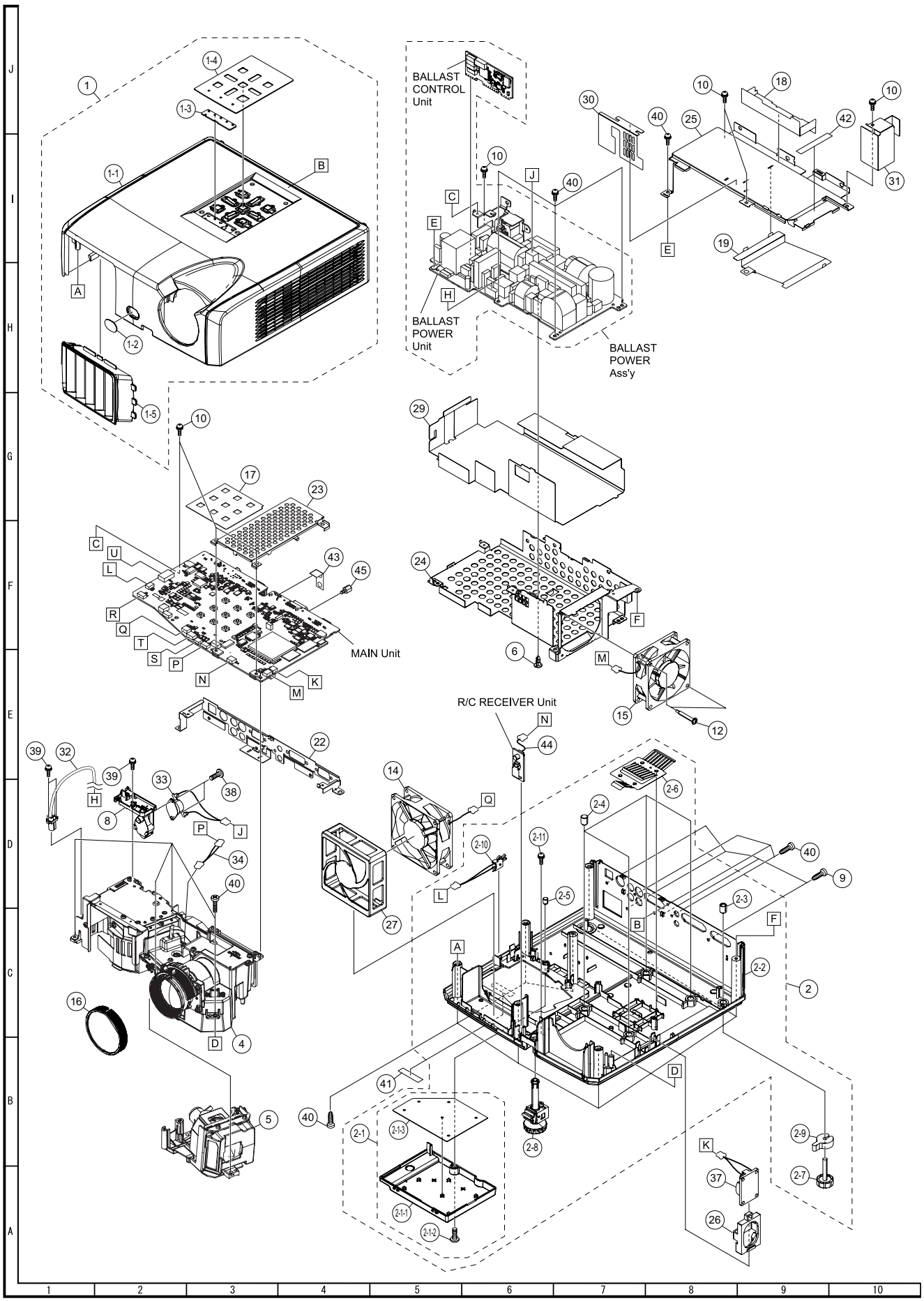
The contents are subject to change without notice.

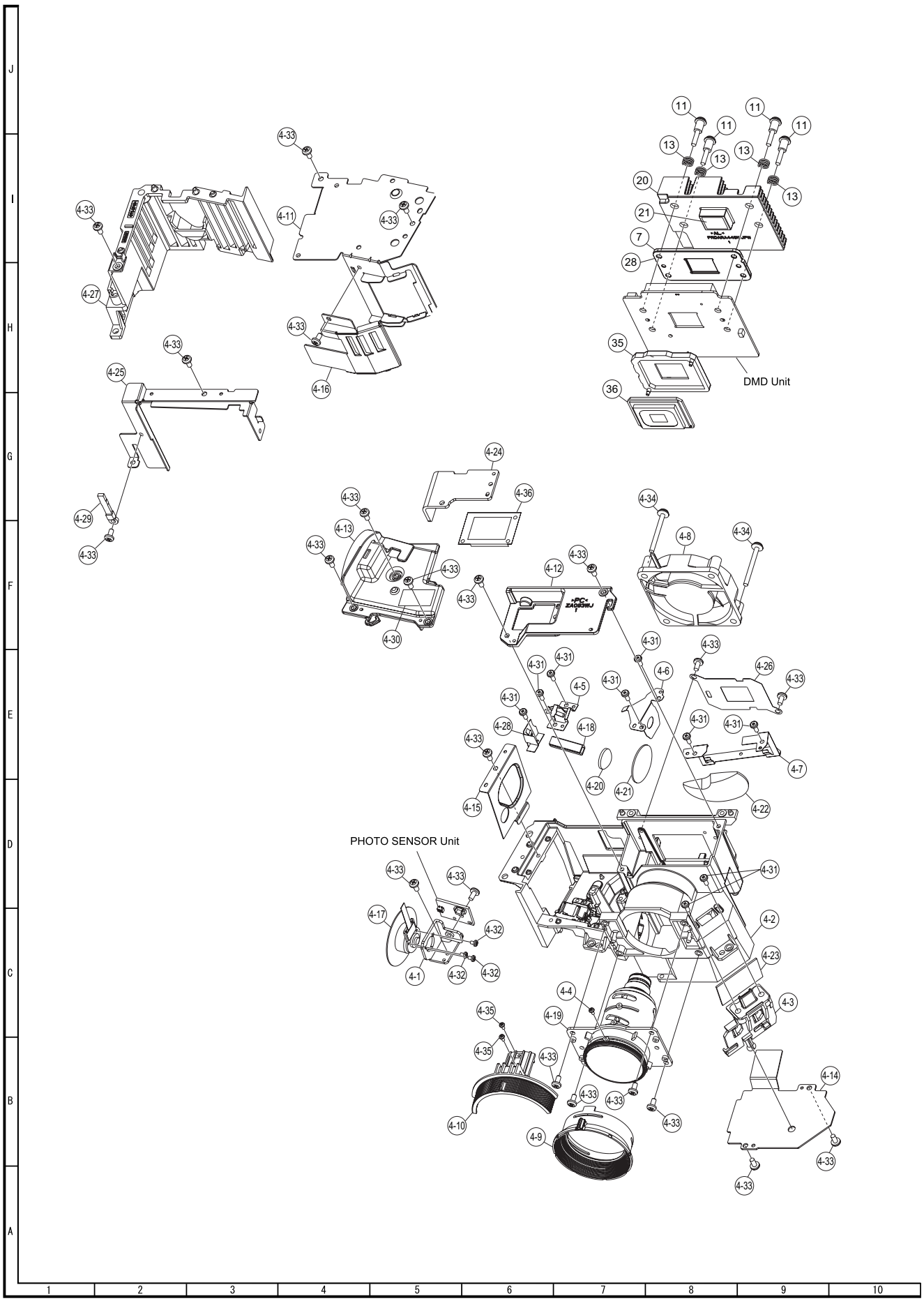
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[1] PRINTED WIRING BOARD ASSEMBLIES					
N	DSETUE149FMG0	BZ	N	J	BALLAST POWER Ass'y (with Ballast Control Unit)
N	Not Available	–	N	–	BALLAST POWER Unit Order the BALLAST POWER Ass'y (DSETUE149FMG1) when replacing ballast power unit (DUNTKE149WEF1).
N	DUNTKE150WEF0	BW	N	J	BALLAST CONTROL Unit
N	DUNTKE151WEF0	AY	N	J	PHOTO SENSOR Unit
N	DUNTKE152WEF0	AY	N	J	R/C RECEIVER Unit
N	DUNTKE153FMF2	DA	N	J	MAIN Unit (XR-40X/41X)
N	DUNTKE153FMF3	DB	N	J	MAIN Unit (XG-F260X)
N	DUNTKE154WEF0	CN	N	J	DMD Unit (without the DMD chip)

[2] CABINET AND MECHANICAL PARTS



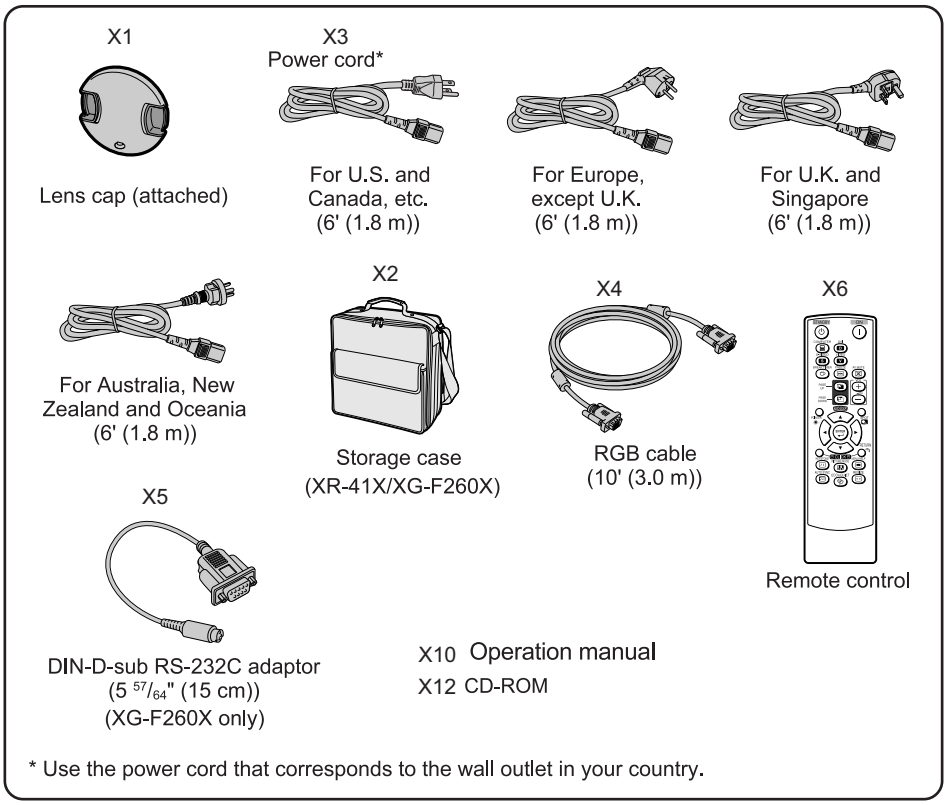
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[2] CABINET AND MECHANICAL PARTS					
1	CBDYTA235WEF0	BR	N	J	Top Body Ass'y (XR-40X)
1	CBDYTA236WEF0	BR	N	J	Top Body Ass'y (XG-F260X)
1	CBDYTA245WEF0	BQ	N	J	Top Body Ass'y (XR-41X)
1-1	Not Available	–	N	–	Top Body
1-2	GCOVAC364WJSA	AE	N	J	Cover
1-3	HDECPA034WJSA	AK	N	J	Decoration Plate
1-4	HiNDPC319WJSA	AN	N	J	Indicator (XR-41X)
1-4	HiNDPC319WJSC	AM	N	J	Indicator (XR-40X/XG-F260X)
1-5	GCOVAC242WJKB	AS	N	J	Cover (XR-40X)
1-5	GCOVAC242WJKC	AS	N	J	Cover (XG-F260X)
1-5	GCOVAC242WJKD	AS	N	J	Cover (XR-41X)
2	CBDYUA275WEF0	BP	N	J	Bottom Body Ass'y (XR-40X)
2	CBDYUA276WEF0	BP	N	J	Bottom Body Ass'y (XG-F260X)
2	CBDYUA284WEF0	BP	N	J	Bottom Body Ass'y (XR-41X)
2-1	CDORUA075WEF0	AQ	N	J	Lamp Door Ass'y
2-1-1	Not Available	–	N	–	Lamp Door
2-1-2	LX-BZA185WJFN	AB	N	J	Screw
2-1-3	PSLDHA047WJFW	AK	N	J	Shield
2-2	Not Available	–	N	–	Bottom Body
2-3	LX-NZ3120CEFW	AB		J	Nut
2-4	LX-NZ3144CEFW	AC		J	Nut, x4
2-5	LX-NZA014WJFW	AC		J	Nut
2-6	QEARPA250WJFW	AK	N	J	Bottom Earth Shield
2-7	GLEGPA030WJSA	AK		J	Foot (Rear Adjuster)
2-8	GLEGPA036WJSA	AP	N	J	Foot (Front Adjuster)
2-9	PSPAZB478WJZZ	AC	N	J	Spacer
2-10	QCNW-F721WJQZ	AN	N	J	Connecting Cord
2-11	XEBSN30P10000	AA		J	Screw
4	-----	–		–	Refer to Optical Mechanism Parts
5	AN-XR30LP	–	N	J	Lamp Unit
6	LHLDFA011WJKZ	AC		J	Holder (Power PWB)
8	LHLDZA849WJKZ	AQ	N	J	Holder (Bimetal)
9	LX-BZ3049GEFN	AB		J	Screw, x4
10	LX-BZ3100CEF7	AA		J	Screw, x7
12	LX-BZA186WJF9	AD	N	J	Screw, x2
14	NFANRA076WJ00	BM	N	J	Fan
15	NFANRA078WJ00	BP	N	J	Fan
16	PCOVPA037WJSA	AU		J	Cover
17	PCOVUA105WJ00	AF	N	J	Cover
18	PCOVZA099WJZZ	AE	N	J	Cover
19	PCOVZA100WJZZ	AF	N	J	Cover
22	PSLDMB118WJFW	AM	N	J	Shield
23	PSLDMB119WJFW	AK	N	J	Shield
24	PSLDMB122WJFW	AZ	N	J	Shield
25	PSLDMB123WJFW	AX	N	J	Shield
26	PSPAGA370WJKZ	AP	N	J	Spacer
27	PSPAGA371WJKZ	AW	N	J	Spacer
29	PZETKA227WJKZ	AX	N	J	Insulator
30	PZETKA233WJKZ	AD	N	J	Insulator
31	PZETKA240WJKZ	AG	N	J	Insulator
32	QCNW-F711WJQZ	AZ		J	Connecting Cord
⚠1 33	QCNW-F718WJPZ	AY	N	J	Connecting Cord
34	QCNW-F720WJQZ	AG	N	J	Connecting Cord
37	RSP-ZA085WJQZ	AP		J	Speaker
38	XBBSN30P06000	AA		J	Screw
39	XBPSN30P08JS0	AB		J	Screw, x3
40	XEBSN30P10000	AA		J	Screw, x18
41	Not Available	–	N	–	Serial No Label
42	PCOVWA015WJKZ	AC	N	J	Spacer
43	QEARPA256WJFW	AB	N	J	Ground-Part
44	QCNW-G254WJQZ	AH	N	J	Connecting Cord
45	NSFTZ0134CEFW	AD		J	Shaft, x2 (for DVI Socket)

[3] OPTICAL MECHANISM PARTS



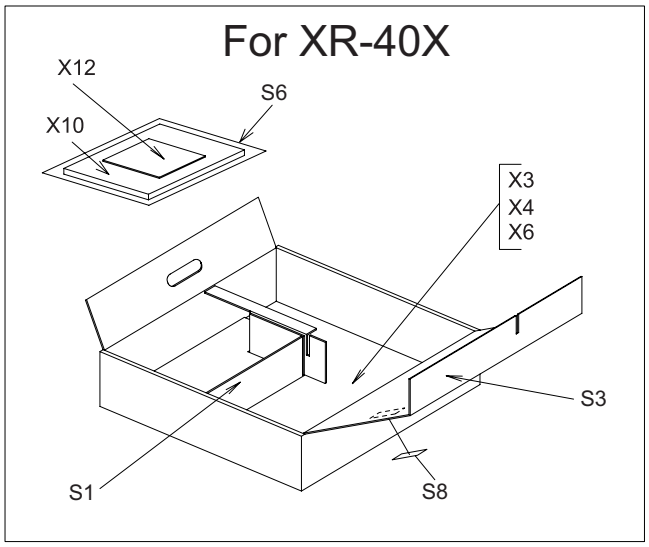
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[3] OPTICAL MECHANISM PARTS					
4-1	LANGKB121WJFW	AE	N	J	Fixing Metal
4-2	LCHSKA024WJFW	BQ	N	J	Chassis
4-3	LHLDZA845WJKZ	AN	N	J	Holder
4-4	LX-EZA027WJFN	AC	N	J	For Focus Ring, x3
4-5	MSPRPA095WJFW	AF	N	J	Spring
4-6	MSPRPA096WJFW	AG	N	J	Spring
4-7	MSPRPA097WJFW	AK	N	J	Spring
4-8	NFANRA077WJ00	BH	N	J	Fan
4-9	PCOVPA036WJSA	AR	N	J	Cover
4-10	PCOVPA038WJSA	AS	N	J	Cover
4-11	PCOVZA089WJFW	AP	N	J	Cover
4-12	PCOVZA093WJKZ	AM	N	J	Cover
4-13	PCOVZA094WJKZ	AN	N	J	Cover
4-14	PCOVZA095WJFW	AL	N	J	Cover
4-15	PCOVZA096WJFW	AG	N	J	C/W Cover
4-16	PDUC-A088WJFW	AF	N	J	Exhaust Duct
4-17	PFiLWA120WJZZ	CC	N	J	Filter
4-18	PLNS-A059WJZZ	BF		J	Lens
4-19	PLNS-A080WJZZ	AT	N	J	Lens
4-20	PLNS-A083WJZZ	AT	N	J	Lens
4-21	PLNS-A084WJZZ	AT	N	J	Lens
4-22	PLNS-A085WJZZ	BD	N	J	Lens
4-23	PMiR-A125WJZZ	AU	N	J	Mirror
4-24	PRDARA446WJFW	AQ	N	J	Heat Sink
4-25	PSLDHA048WJFW	AK	N	J	Shield
4-26	PSLDPA077WJFW	AM	N	J	Shield
4-27	PSLDPA072WJKZ	AZ	N	J	Shield
4-28	PSLDPA073WJFW	AD	N	J	Shield
4-29	RH-HXA040WJQZ	AS	N	J	Thermistor
4-30	TLABZB026WJZZ	AE		J	No. Label
4-31	XBBS925P06000	AA		J	Screw, x9
4-32	LX-BZA205WJFN		N	J	Screw, x3
4-33	XBBSN30P06000	AA		J	Screw, x22
4-34	XBPSN30P20JS0	AB		J	Screw, x2
4-35	XEPSN17P05000	AB	N	J	Screw, x2
4-36	PSLDPA078WJFW	AF	N	J	Flat Ray Shield
7	LHLDZA612WJFW	AL		J	Holder (Backer Plate)
11	LX-BZA110WJF7	AC		J	Screw, x4
13	MSPRCA062WJFJ	AB		J	Spring, x4
20	PRDARA445WJFW	AZ	N	J	Heat Sink
21	PSHEGA040WJZZ	AE		J	Sheet
28	PSPAZA768WJZZ	AD		J	Spacer
35	QSOCZA114WJZZ	BA		J	Socket
36	RDMDPA027WJZZ	CW		J	DMD Chip, 0.55" XGA

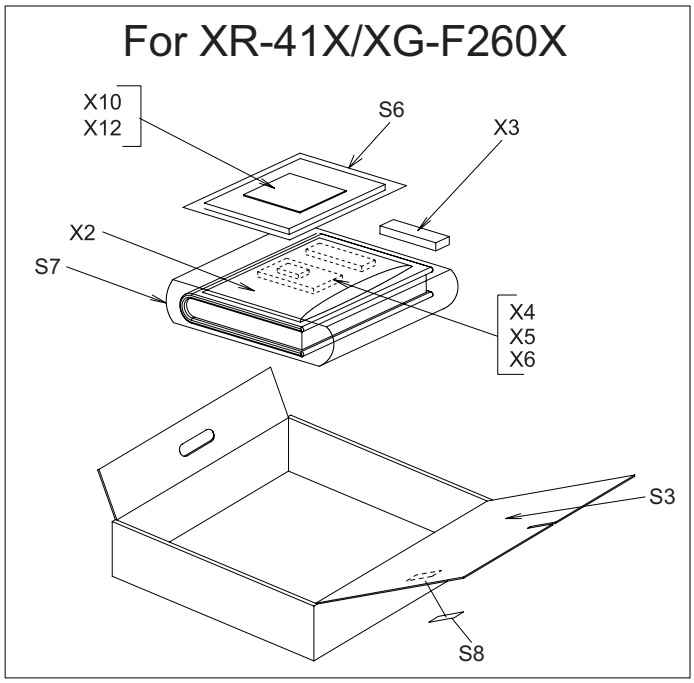
[4] SUPPLIED ACCESSORIES

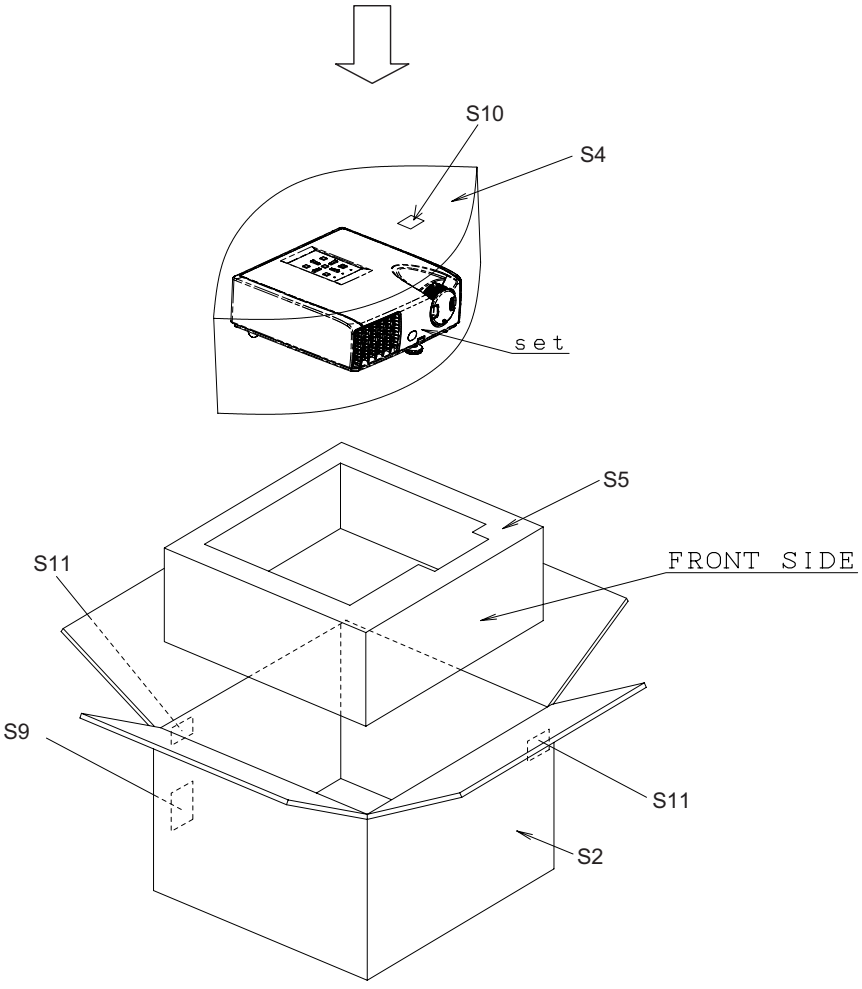

X1
Lens cap (attached)
X3
Power cord*
For U.S. and Canada, etc. (6' (1.8 m))
For Europe, except U.K. (6' (1.8 m))
For U.K. and Singapore (6' (1.8 m))
For Australia, New Zealand and Oceania (6' (1.8 m))
X2
Storage case (XR-41X/XG-F260X)
X4
RGB cable (10' (3.0 m))
X6
Remote control
X5
DIN-D-sub RS-232C adaptor (5 57/64" (15 cm)) (XG-F260X only)
X10 Operation manual
X12 CD-ROM
* Use the power cord that corresponds to the wall outlet in your country.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] SUPPLIED ACCESSORIES					
X1	CCAPHA027WJSA	AH	N	J	Lens Cap
X2	GCASNA021WJSA	BD	N	J	Storage case (XR-41X/XG-F260X)
⚠ X3	QACCBA036WJPZ	AX		J	AC Cord (for U.K and Singapore)
⚠ X3	QACCDA007WJPZ	AR		J	AC Cord (for U.S.A and Canada, etc.)
⚠ X3	QACCLA018WJPZ	AU		J	AC Cord (for Australia, New Zealand and Oceania)
⚠ X3	QACCVA011WJPZ	AT		J	AC Cord (for Europe, except U.K)
X4	QCNWGA045WJPZ	AU		J	RGB Cable
X5	QCNWGA091WJPZ	AZ	N	J	DIN-D-sub RS-232C adaptor (XG-F260X)
X6	RRMCGA581WJSA	BD		J	Remote Control
X7	TCAUZA187WJZZ	AC		J	WEEE Caution Sheet (Except U.S.A and Canada)
X8	TGAN-A794WJZZ	AB	N	J	SEC Warranty (for USA)
X9	TGAN-A811WJZZ	AB	N	J	SECL Warranty (for Canada)
X10	TiNS-D050WJZZ	AX	N	J	Operation Manual (XR-40X)
X10	TiNS-D109WJZZ	AR	N	J	Operation Manual (XG-F260X)
X10	TiNS-D158WJZZ	AR	N	J	Operation Manual (XR-41X)
X11	TLABZA956WJZZ	AB		J	WEEE Mark Label (Except U.S.A and Canada)
X12	UDSKAA089WJZZ	AM	N	J	CD-ROM (XR-40X/XG-F260X)

[5] PACKING PARTS (NOT REPLACEMENT ITEM)







NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[5] PACKING PARTS (NOT REPLACEMENT ITEM)					
S1	SPAKAA329WJZZ	–	N	–	Packing Add. (XR-40X)
S2	SPAKCD451WJZZ	–	N	–	Packing Case (XR-40X)
S2	SPAKCD452WJZZ	–	N	–	Packing Case (XG-F260X)
S2	SPAKCD508WJZZ	–	N	–	Packing Case (XR-41X)
S3	SPAKFB224WJZZ	–	N	–	Accessory Case
S4	SPAKPA869WJZZ	–	N	–	Wrapping Paper
S5	SPAKXB477WJZZ	–	N	–	Packing Add
S6	SSAKA0160CEZZ	–	N	–	Polyethylene Bag
S7	SSAKAA097WJZZ	–	N	–	Polyethylene Bag (for Storage case) (XR-41X/XG-F260X)
S8	TLABV0003SEZZ	–		–	Model Name Label
S9	TLABVA333WJZZ	–		–	Bar Code Label (for U.S.A, Canada)
S9	TLABVA493WJZZ	–		–	Bar Code Label (for Europe, U.K)
S10	TLABZA610WJZZ	–		–	Recycle Label (for Europe except U.K)
S11	TLABZA957WJZZ	–		–	C.W.Mark, x2 (for Europe and Singapore)
[6] SERVICE JIGS AND EQUIPMENT (USE FOR SERVICING)					
N	QCNW-C516WJQZ	AG		J	Extension Cable, 3pins L=200mm, Main to Fan, x2
N	QCNWKA006WJZZ	AX		J	Extension Cable, 4pins L=500mm, Main to Fan
N	QCNWKA008WJZZ	AP		J	Extension Cable, 14pins, Main to Power
N	QCNWKA019WJZZ		N	J	Extension Cable, 120pins, Main to DMD
N	RUNTZA018WJZZ	DR		J	Adjustment Jig, for the Ballast Unit
N	QCNWKA020WJZZ		N	J	Extension Cable, 3 to 2pins

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